Nurse Driven Volume Based Feeding

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Nurse Driven Volume Based Enteral Feeding

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Purpose

- Project Purpose: To decrease malnutrition in adult patients located in an ICU setting.

PICO QUESTION

- PICO Question – written as a question and show the elements (PICO)
- (I) Nurse regulated volume based enteral feedings in (P) adult patients located in and ICU setting to (O) more efficiently meet nutritional goals daily by critically ill patients vs. (C) amount of nutrition received by standard physician protocols.

Myths and Misconceptions:

- Starvation and under nutrition is acceptable.
- Parenteral nutrition is safe.
- Vasopressors contraindicate enteral nutrition.
- Early enteral nutrition is not important in patients receiving mechanical ventilation.
- Early enteral nutrition is contraindicated with high gastric residual volume. (Stomach can accommodate 500-700 cc)
- Post-pyloric feeding reduces the risk of aspiration.
- Enteral nutrition is contraindicated following gastric surgery.
- Enteral nutrition is contraindicated in patients with open abdomen.
- Enteral nutrition is contraindicated in patients with pancreatitis.
- Patients must be fed in semirecumbant position at 45 degrees.
- Enteral nutrition is contraindicated in patients without bowel sounds, no evidence suggests absence of bowel sounds=no movement.

Traditional Set-Rate Feeding:

- Set rate
- Problems: Is put on hold for medications, various testing, extubation, turning of patient, laying patient flat, “high residual,” etc.

Nurse Driven Protocols:

- Patient is to receive target amount of tube feeding per day for a given pt. as in standard protocols.
- Nurse increases/decreases rate or provides boluses and holds TF as needed to meets daily goals.
- Gastric residual allowance increased per new findings.
- Gastric motility agents started sooner along with TF.

EVIDENCE – Study 1

- Prospective before and after study in (unnamed) ICU in Canada
- PEP uP protocol findings: Patients received 83.2% of their energy requirements and 89.4% of their protein requirements compared to 58.8% and 61.2% traditional set rate average outcomes.
  - In addition average start time decreased and no increased complications were noted. (Vomiting, VAP, micro aspiration.)
- PEP uP patients received significantly more of the goal nutritional intake vs non-PEP uP patients.
- Heyland, D.K. et al. (2010). Enhanced protein-energy provision via the enteral route in critically ill patients: a single center feasibility trial of the PEP uP protocol. Critical Care, 14(78). doi: 10.1186/cc8991

Evidence – Study 2

- RCT multicenter study across 24 ICUs in Canada
- Control total nutrition received: 56.2% +/- 29.4%
- Variable total nutrition received: 68.5% +/- 32.8%
- PEP uP protocol – nurse driven, displayed overall novel improvements in patient EN.
- Heyland, D.K. et al. (2014). Implementing the PEP uP protocol in critical units in canada: results of a multicenter, quality improvement study. Journal of Parenteral and Enteral Nutirion, 20:10, 1-9. doi: 10.1177/0148607114531787.

Evidence – Study 3

- Prospective before and after comparative study.
- Time reduction methods in initiating and reducing disruptions in enteral feeding vs. standard protocols.
- Targeted strategies to enteral feeding practice resulted in a reduction to the number of interruptions but not the
- duration of enteral nutrition lost to interruption
- Williams, T.F. et al. (2012). Reducing interruptions to continuous enteral nutrition in the intensive care unit: a comparative study. Journal of Clinical Nursing, 22, 2838–2848, doi: 10.1111/jocn.12068

BARRIERS & STRATEGIES

- Barrier: Attitudes towards change, need new orders and protocol, Trial based upon 1 set of ICU patients, patient needs change throughout stay, etc…

- Strategy to Overcome: getting people to "buy in" (RN's, MD's, NP's, RD), Trial in multiple ICU's, keep current on research.

Expected Outcomes

- Patients receive increased amounts of prescribed enteral feedings per day.
- Increased nutrition and health benefits – decreased mortality rates
- Nurse empowerment

PROJECT PLANS

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Questions or Comments?

THANK YOU !

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